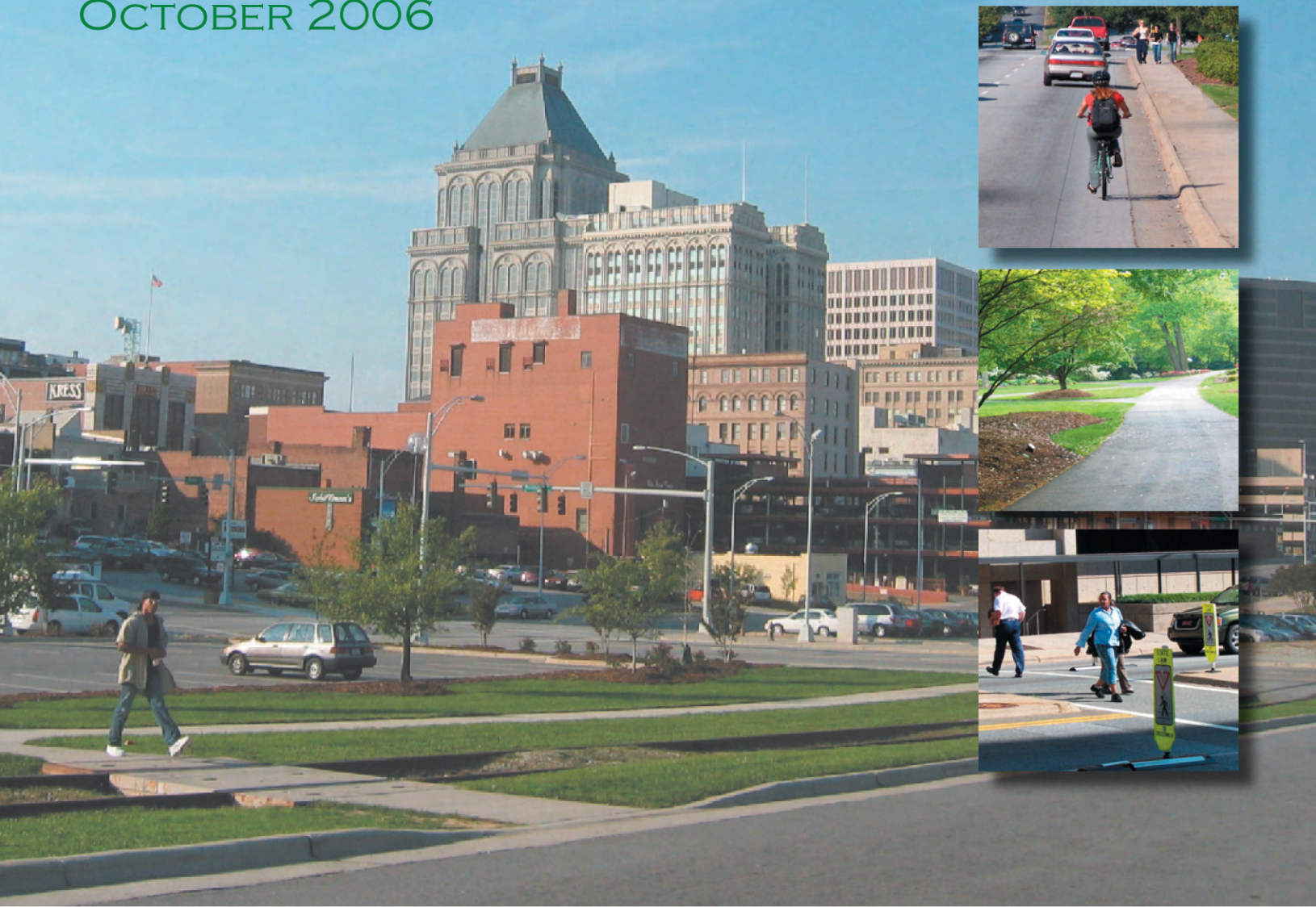


GREENSBORO URBAN AREA BICYCLE, PEDESTRIAN & GREENWAY MASTER PLAN



SUMMARY OF KEY FINDINGS

OCTOBER 2006



GREENSBORO URBAN AREA BICYCLE, PEDESTRIAN & GREENWAY MASTER PLAN

SUMMARY OF KEY FINDINGS

Prepared by staff of
the Greensboro Urban Area
Metropolitan Planning Organization
based on the Master Plan

MASTER PLAN

Adopted October 11, 2006 by
the Greensboro Urban Area
Metropolitan Planning Organization

Prepared by
Greenways Incorporated and
Toole Design Group
in cooperation with
the City of Greensboro and
Action Greensboro, Inc.

Funding for this study was provided by
the Moses Cone-Wesley Long Community Health Foundation and
the Greensboro Urban Area Metropolitan Planning Organization.



Goals and Objectives

Connectivity

One of the primary goals of this plan is to improve non-motorized facility connections between origins and destinations and between people and the outdoors.

Health and Wellness

A principal concern and goal for this project has been to improve the health and wellness of area residents by improving access to outdoor resources, partly through the provision of facilities that residents will consider safe and inviting.

Safety

Pedestrian and bicycle activity should become safer and more convenient throughout the Greensboro Urban Area.

Growth Management

The proposed bicycle, pedestrian, and greenway network can be used to guide future growth and development and complement land use planning strategies such as higher density mixed-use development.

Planning for the future provides an important strategy for the Greensboro area as it continues to grow and change. More specifically, planning for bicycle, pedestrian, and greenway needs is a key step towards meeting the community and facility needs of tomorrow. It also supports other goals of the community – land use planning, public transportation, and economic development, for example.

The Bicycle, Pedestrian, and Greenway Master Plan marks an important step for the community. The plan builds off of existing efforts, a thoughtful review of current conditions and prospects, and extensive community outreach to provide a framework for an ongoing and evolving implementation effort for the years ahead.

The Master Plan was developed through a partnership involving the Greensboro Urban Area Metropolitan Planning Organization (MPO), Greensboro Parks and Recreation Department, and Action Greensboro. The MPO came to the planning effort with a focus on pedestrian and bicycle transportation needs. Action Greensboro and Parks & Recreation came with a focus on greenways and health; this aspect was supported through a grant from the Moses Cone-Wesley Long Foundation.

In January 2005, these groups commissioned Greenways Incorporated, a nationally known firm specializing in open space and greenway planning, to prepare the health and wellness and greenway elements of this plan. In July 2005, the Greensboro Department of Transportation (GDOT, the lead planning agency for the MPO) commissioned Greenways Incorporated and Toole Design Group, a nationally known firm specializing in bicycle and pedestrian planning, to support the bicycle and pedestrian transportation elements. The work team included GDOT staff in a cooperative effort to develop appropriate recommendations.

On October 11, 2006, after the conclusion of a 30-day public review period, the MPO officially adopted the plan. Some changes were made based on comments received during that period, and all comments were addressed in a summary document. Now, the completed plan is being provided to MPO-area governments and the NCDOT for their consideration. Citizens can use the plan to better understand needs, and local governments and the NCDOT can use it as a guide for implementation.

The plan represents the first time in the history of the Greensboro area that a comprehensive evaluation and program of action has been prepared to address the immediate and long-term needs for bicycle, pedestrian and greenway facilities. The full plan is available from the MPO's web site, www.guampo.org; what you are reading is a summary of the plan's key findings. In it you will find a sum-

Recommendations

The attached maps show proposed new facilities and routes. To jump straight to explanations of the maps, go to...

Greenways: p. 4
Bikeways: p. 9
Bike routes: p. 13
Sidewalks: p. 15



Alternative Transportation

This plan is specifically structured to increase transportation choices through improved bicycling and pedestrian facilities, connecting area residents through quality routes of travel to destinations such as workplaces, schools, shopping, and public transportation.

Enhance the Environment

The proposed bicycle, pedestrian and greenway network will serve to improve the ecosystems and environment of the Greensboro Urban Area, specifically helping to reduce dependence on automobile travel and thereby improving air quality, and through the conservation of natural resources.

Economic Development

Improved bicycle and pedestrian facilities will increase livability, boost tourism, and make the area a more attractive place for business and industry.

mary of the purpose and need for the plan, overview descriptions of the recommended greenway, bicycle, and pedestrian facilities, selected maps and tables showing recommendations, and summarized policy recommendations and next steps.

Purpose

While it does not present hard-and-fast requirements, the plan aims to put a program of suggested future improvements in perspective within an area-wide network. In other words, it provides a guide and recommendations that each MPO jurisdiction can choose to implement. Other purposes include:

- To define an important connection between public health and the diminishing access to outdoor landscapes, and how a community-wide bicycle, pedestrian and greenways plan can serve to improve the health and wellness of area residents.
- To define immediate and long-term goals for the bicycle, pedestrian, and greenways system of the future.
- To propose an interconnected system of greenways, on-road bicycle facilities and sidewalks, that when linked together, will enhance transportation safety, broaden choices for getting to destinations around the area on foot, bicycle, and public transportation, and form a web of outdoor facilities providing improved access to outdoor resources for transportation and recreation purposes.
- To use the development of integrated bicycle, pedestrian, and greenway facilities as a strategy to help the community achieve a range of community goals for land use, enhanced livability, and economic competitiveness.

Why Create this Plan?

The need and demand for a more accessible, safe and functional bicycle, pedestrian and greenway system is paramount throughout the Greensboro Urban Area. This is clearly articulated by community residents who attended open house meetings, and is more strongly evident in surveys conducted by the University of North Carolina at Greensboro Department of Public Health Education and through additional interest-based surveys conducted by Greenways Incorporated.

BiPed by the Numbers

Public meetings held:	9
Surveys conducted:	4
Recommended mileage of...	
Greenways:	420
Bicycle facilities:	900
Sidewalks:	362



Analysis supports the need for a more comprehensive bicycle, pedestrian, and greenway network to serve the Greensboro metropolitan area. Health and wellness issues, bicycle and pedestrian crashes, levels of service, and community input all point towards the need for safe, functional accessibility to the outdoors. These needs can be met with a comprehensive system of on-road and off-road bicycle, pedestrian, and greenway facilities and the programs and policies to support this process.

The full version of this plan defines the specific needs of area residents and addresses the issue of health and wellness from national, state, and local perspectives. Transportation safety, accessibility, and enhanced mobility are discussed with a detailed look at bicycle/pedestrian crash data, and a Level of Service is provided for existing bicycle facilities and greenways. In this summary of key findings, we move straight to the recommended facility network.



Recommended Bicycle, Pedestrian and Greenway System

The Master Plan builds off of the City of Greensboro's Walkability initiatives and the greenway programs of the City and the County, along with an in-depth review of on-street bicycling conditions and the prospects for future improvements. As a result, the plan reflects current implementation efforts of area governments – some of what you see in this plan has already been done. For example, the City currently has 61.5 miles of sidewalk in various stages of design, property acquisition, and utility relocation, and an additional 16 miles under contract for construction.

Greensboro currently has 61.5 miles of sidewalk in design and an additional 16 miles under contract for construction.

In general, however, the greenway, bicycle, and pedestrian facilities that are proposed in this document are planning-level recommendations. The plan provides a starting point, and municipalities will need to take further steps towards implementation. Most recommendations will need to go through further evaluation and a design-level analysis before they can be constructed. Further investigation and negotiations will be necessary to finalize individual trail alignments and types before trail design and construction can begin. Environmental constraints, land ownership, and future opportunities such as new land acquisition or newly added sidewalk may prompt changes. Also, facilities should be designed and constructed with the goal of accessibility for all people.



Methodology

The greenway network was developed using a number of sources:

- Geographic information systems map layering and analysis
- Fieldwork
- Connections into existing trail system, ongoing greenway efforts, and regional trail systems
- Projects listed in previous planning efforts
- Public workshops
- Community focus group meetings
- Online questionnaire
- Staff input

Greenway Recommendations

Greenways can be suitable for recreation and transportation and can protect sensitive lands. A system of nearly 420 miles of greenway is recommended, adding to the existing 81 miles in Greensboro and approximately 100 miles in the Greensboro Urban Area. The greenway and trail recommendations are intended to cover all geographic areas, especially populated areas. Using Map 4.1 to see where the recommended routes are, read on to find out more about different types of greenways. Then, use Table 1 and the map to see the type and length for each recommended greenway. The full plan has more detailed information on each greenway.

Recommended Greenway Facility Types

There are six types of greenways, encompassing completely natural spaces, on-street routes, and water trails. Each of the facility types is appropriate for different routes, depending on local need, and land use characteristics.

Type I: No Facility Development (Corridor)

This designation applies to greenway corridors containing environmentally sensitive areas, steep slopes, wetlands, or other constraints that make greenway facility development undesirable or impossible. This type of greenway corridor would remain primarily in a natural state, as human access would be restricted or extremely limited. The functions of this type of greenway corridor may include floodplain management, water quality protection, and conservation of important habitats for plants and wildlife.

Type II: Limited Development

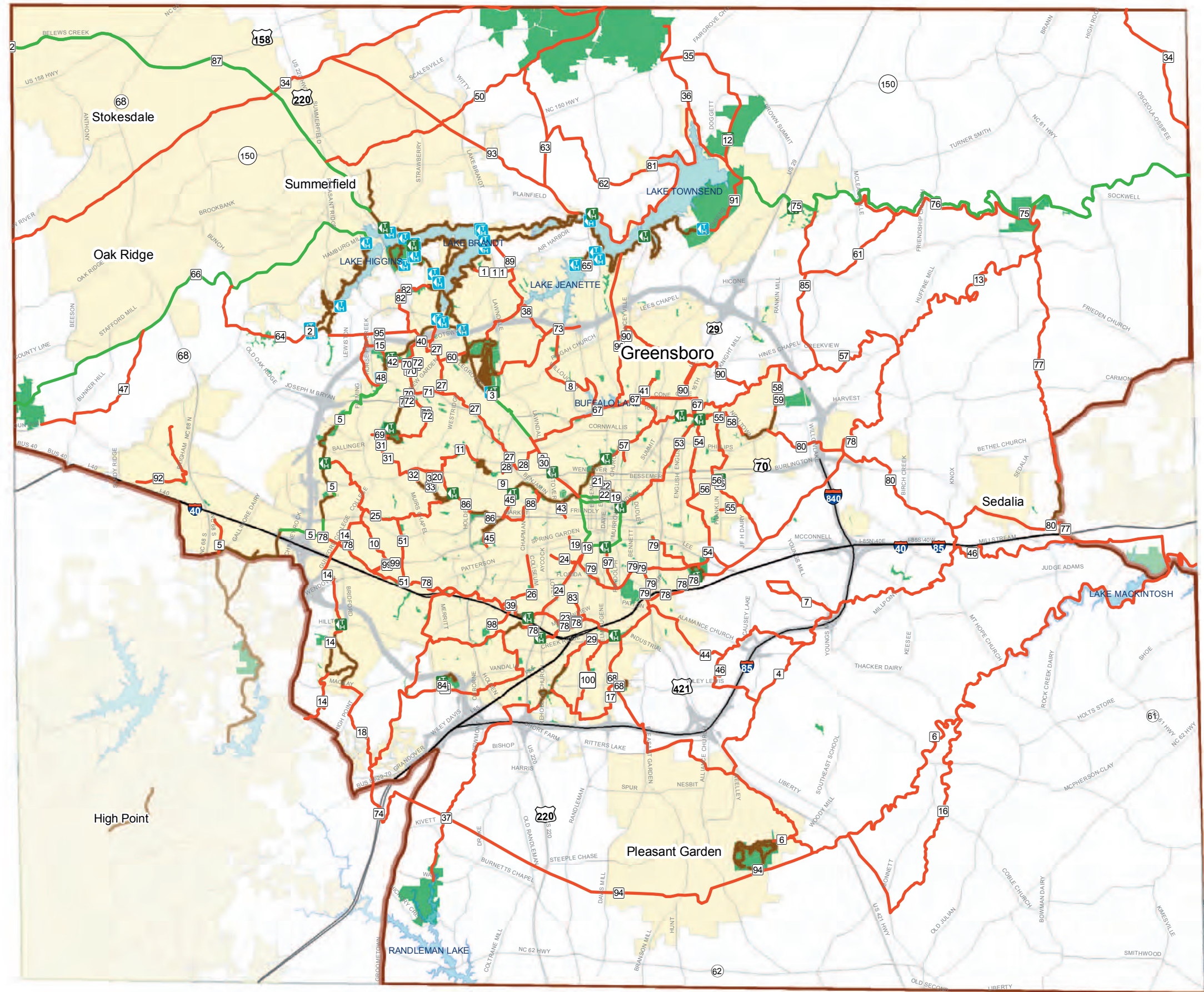
This designation would apply to corridors containing environmentally sensitive landscapes that limit the extent of facility development. This type of greenway corridor would remain primarily in a natural state, with dirt footpaths (4-6 feet wide) for use by one or two low-impact user groups, such as hikers or equestrians. Trailhead facilities and other amenities, such as picnic tables or signage, would be limited.

Type III: Multi-use Unpaved Trail

This designation would apply to greenway corridors where the adjacent natural areas, rural landscapes, or historic sites dictate a more natural facility development objective; where the corridors are located outside areas that are prone to frequent flooding; or where use is anticipated to be recreational and at a lower volume than other areas. The unpaved trails could be surfaced with gravel or crushed stone (10-12 feet wide) and may include boardwalk over environmentally sensitive or saturated areas.

This type of trail is designed for several user groups, such as bicyclists, joggers, and equestrians. Wheelchair users and persons with strollers can use unpaved trails if they are designed to





GREENSBORO URBAN AREA

COMPREHENSIVE BICYCLE, PEDESTRIAN, AND GREENWAY PLAN

MAP 4.1

RECOMMENDED GREENWAY FACILITIES

- Legend**
- Recommended Trailheads
 - Existing Trailhead/Parking
 - Proposed Greenways
 - Ongoing Efforts
 - Existing Off-Road Trails
 - Urban Loop
 - Interstate
 - Major Roads
 - Parks
 - Incorporated
 - Greensboro MAB
 - Lakes

1
Miles



Data Source: City of Greensboro

Americans with Disabilities Act (ADA) standards and surfaced with compacted crushed stone. Trailhead facilities and other amenities, such as benches, signage, and picnic tables, would be developed appropriately.

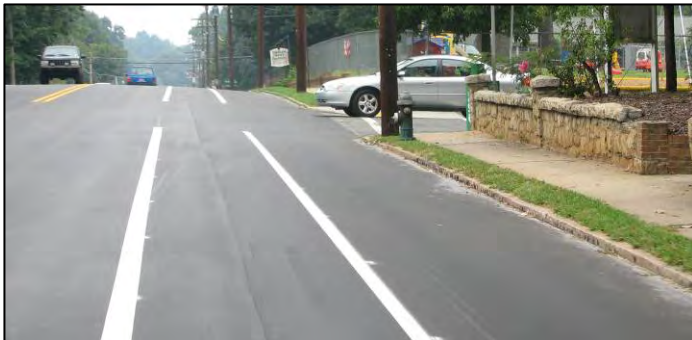
Type IV: Multi-use Paved Trail

This designation would apply to corridors where high use is anticipated; where greenways do not contain environmentally sensitive landscapes; where corridors will most likely be used as transportation routes; where corridors are located inside areas that are prone to frequent flooding; or where corridors are located within urban areas. The paved trails could be surfaced with asphalt or concrete (10-12 feet wide). Although asphalt is the most common paved surface for trails, concrete is the best material in areas experiencing frequent flooding.

This type of greenway corridor is designed for several user groups, such as bicyclists, joggers, and rollerbladers. All multi-use paved trails should be ADA accessible. Trailhead facilities and other amenities, such as lights, benches, and signage, would be developed appropriately. It should be noted that although a substantial portion of the recommended greenway network is Type IV, a drop to Type III or even Type II may be necessary based on a variety of circumstances (environmental or property-based).

Type V: On-road Facilities

This designation applies towards corridors in urban areas where an off-road option is not possible, or corridors which function as connections between off-road trails and major origins and destinations. On-road greenways would consist of both sidewalks for pedestrian use and bikeways for cyclists when possible. Bikeways can vary from 6 foot wide bike lanes (complete with pavement striping



and signage) to 4 foot wide paved roadway shoulders to a 14 foot wide curb lane (to be shared by cyclists and motorists). Pedestrian scale lighting, street trees, benches, and other amenities could be developed to encourage sidewalk use. Further evaluation of these corridors by

GDOT and Parks and Recreation will be necessary to determine proper facility type.

Type VI: Paddle Trails

This designation applies to river and stream corridors that can successfully accommodate or have been designated to support low impact, non-motorized water travel, such as canoeing and kayaking. Water-based trails can be designed with appropriate features

Ancillary Greenway Facilities

In addition to the recommended greenways, ancillary facilities support and enhance the system. Informational and directional signage, safe roadway crosswalks, and trailheads are critical for a user-friendly and safe experience. Lighting, emergency call boxes, planting, educational plaques/signage, and benches further enhance this experience.

Recommended trailhead sites (where no trailhead currently exists or an existing trailhead needs improvement) are shown on Map 4.1. Further investigation into site-specific conditions and environmental and acquisition constraints will be necessary.

Also, because greenways will at times be near public parking lots, it is recommended that two actions be taken:

- 1) Establish cooperative relationships and partnerships with churches, businesses, etc. to allow for parking near trails and
- 2) Develop public education piece/map directing people to appropriate parking sites. This will assist in handling greenway parking issues during the development of the greenway network.

and facilities, such as inputs, signage, improved rapids, and safety systems, to make water trails more enjoyable.

Description of Recommended Greenway Network

The full plan provides descriptions of 100 greenway and trail corridor recommendations throughout the Urban Area. Attention is given to the greenway facility type(s), the geographic location (beginning and ending points), and major opportunities and constraints. These are presented here in alphabetical order. Use the ID numbers in Table 1 and Map 4.1 to find the locations of each of these greenways.

Table 1. Summary of recommended greenway facilities.

ID	Name	Length	Type
1	Air Harbor Greenway	1 mile	III & V
2	Bald Eagle - Beech Bluff Connector Trail	0.1	II
3	Battleground Rail-Trail	1	IV
4	Beaver Creek Greenway	3.6	II & III
5	Bicentennial Greenway	16	IV & V
6	Big Alamance Creek Greenway	22	II & V
7	Big Dipper Greenway	2.6	II & V
8	Birds Nest Greenway	3.6	IV & V
9	Bog Garden Connector	0.05	V
10	Brandywine Greenway	1.6	IV & V
11	Brown Bark Greenway	2.3	IV & V
12	Bryan Park Greenway	TBD	III
13	Buffalo Creek Greenway	8.5	III
14	Bull Run Creek Greenway	5.5	III, IV, & V
15	Carolyn Allen Greenway	0.75	III
16	Climax Creek Greenway	6.7	II & V
17	Cotton Greenway	2.8	IV & V
18	Dogwood Greenway	2.6	IV & V
19	Downtown Loop Trail	4	IV & V
20	Erskine Greenway	0.3	III & V
21	Fisher Park Trail Extension #1	TBD	V
22	Fisher Park Trail Extension #2	TBD	V
23	Foust Loop Greenway	0.5	IV & V
24	Freeman Mill Greenway	2	IV & V
25	Friends Greenway	4.4	III, IV, & V
26	Glenwood-Coliseum Greenway	1.6	IV & V
27	Gracewood Greenway	4.1	IV & V
28	Green Valley Connector	1.3	IV & V

The plan includes 100 greenway and trail corridor recommendations throughout the urban area.



Greensboro Urban Area Bicycle, Pedestrian, & Greenway Master Plan
Summary of Key Findings

ID	Name	Length	Type
29	Greenhaven Greenway Trail Extension	1.6	IV
30	Grimsley Connector	0.05	V
31	Guilford Greenway	2.2	IV & V
32	Hamilton Lakes Trail Extension #1	TBD	III
33	Hamilton Lakes Trail Extension #2	TBD	III
34	Haw River Greenway	20+	I & II
35	Haw River State Park Summit Trail	TBD	II & V
36	Haw River State Park Summit Trail #2	TBD	II & V
37	Hickory Creek Greenway	6.3	III, IV & V
38	Hickory Greenway	1	IV
39	Hillsdale Connector	0.6	IV & V
40	Horsepen Creek Greenway	1.3	III & V
41	Joe Davis Greenway	1.3	IV & V
42	Kernodle Connector	0.2	IV
43	Lake Daniel Greenway - UNC-G Spur	0.4	IV & V
44	Liberty Valley Greenway	17.7	II, III, & V
45	Lindley Park Connector	0.4	IV & V
46	Little Alamance Creek Greenway	17.7	II & III
47	Longview Greenway	4.1	III & V
48	McAlister Greenway	1.7	III
49	Meadowview Greenway	1.6	V
50	Mears Fork Creek Greenway	8.5	II
51	Mitchell Greenway	1.5	IV
52	MST Trail	TBD	TBD
53	Muddy Creek Greenway	3	IV & V
54	Muddy Creek Greenway #2	5	IV & V
55	Muddy Creek Greenway #3	4.3	IV & V
56	Muddy Creek Greenway #2 - #3 Connector	TBD	V
57	North Buffalo Creek Greenway	10.5	III, IV & V
58	NE Community Trail Extension #1	TBD	V
59	NE Community Trail Extension #2	TBD	IV
60	New Garden Greenway	0.6	V
61	Northeast School Greenway	TBD	II
62	Northern School Greenway	3.8	III & V
63	Northern School Greenway #2	3	III & V
64	Northwest School Greenway	3.2	II, III, IV & V
65	Osprey Trail Extension	TBD	II
66	Piedmont Greenway	19	TBD
67	Pine Cone Greenway	4.9	IV & V



Greensboro Urban Area Bicycle, Pedestrian, & Greenway Master Plan
Summary of Key Findings



ID	Name	Length	Type
68	Pleasant Garden Greenway	3.3	IV & V
69	Price-Jefferson Connector	0.4	IV
70	Price Park Greenway Extension	1.7	III, IV, & V
71	Price Park Extension - Gracewood Connector	0.75	IV
72	Red Oak Greenway	1.7	TBD & V
73	Redbud Greenway	2.8	IV & V
74	Reddicks Creek Greenway	8.3	III, IV & V
75	Reedy Fork Creek Greenway	17	III & IV
76	Reedy Fork Creek Paddle Trail	TBD	VI
77	Rock Creek Greenway	8.3	II
78	South Buffalo Creek Greenway	21	III, IV & V
79	SE Connector Greenway	3	V
79D	Dudley H.S. - Barber Park Spur	1.5	IV & V
80	Sedalia's Greenway	8.9	III & V
81	Skipping Rocks Greenway	9+	II
82	Sleepy Hollow Greenway	2.9	III & V
83	Southern Hospitality Greenway	TBD	TBD
84	Southwestern Loop Greenway	6.8	IV & V
85	Squirrel Greenway	4.2	III
86	Starmount Greenway	1.1	V
87	Summerfield-Stokesdale Rail Trail	11	III & V
88	Sunset Greenway	1.5	IV & V
89	Sweetgum Greenway	3.2	IV & V
90	The 29 Greenway	5.4	IV & V
91	Townsend Trail Extension	TBD	IV & V
92	Triad-Weaver-Regional Industrial Park Greenway	2.7	III, IV & V
93	Utility Line Greenway #1	7.1	II
94	Utility Line Greenway #2	11	II
95	Utility Line Greenway #3	1.9	III
96	Utility Line Greenway #4	3.8	III & V
97	Vance Arlington Greenway	1.1	IV & V
98	Vanstory Connector (Hillsdale Park Trail)	0.9	V
99	Wendover Greenway	TBD	V
100	Woodlea Greenway	2	IV & V

Bicycle Recommendations

The master plan has a new emphasis for the Greensboro area: providing appropriate on-road bicycle facilities. This section recommends a network of bicycle facilities (shown in Map 4.3) that should be developed over the next twenty years to provide bicycle access to key destinations throughout the area. Recommendations are focused on roadway corridors rather than greenway improvements and are subject to review and refinement over time, including through more detailed work in the project planning and implementation phases.



Bicycle Level of Service (Bicycle LOS)

The Bicycle Level of Service (Bicycle LOS) Model was used to evaluate bicycle suitability on roadways in the Greensboro Urban Area. The Bicycle LOS Model is a scientifically-calibrated method of evaluating the comfort level of bicyclists on a roadway segment, given existing bicycling conditions in relation to motor vehicle traffic. It uses objective, quantitative data to produce a measure of the level of service perceived by a typical bicyclist.

The Bicycle LOS Model uses letter grades to describe existing conditions. Level “A” reflects the best conditions for bicyclists; level “F” represents the worst conditions. A detailed description of the Bicycle LOS Model used in the Greensboro Urban Area is available in Appendix E of the complete document.

The Greensboro Department of Transportation conducted a field inventory to evaluate Bicycle LOS on 870 miles of roadways within the Greensboro Urban Area boundary between November 2005 and February 2006. The results show that approximately one-third (35.1%) of the study network roadways have Bicycle LOS grades of “C” or better. However, most roads have grades of “D” or worse, indicating poor comfort for bicyclists.



Bicycle Facility Network Methodology

The Greensboro Urban Area Bicycle Network was developed using a variety of sources, including:

- Public input (workshops, online questionnaire, and meetings with stakeholder groups and communities surrounding Greensboro)
- Consideration of existing roadway cross-sections, traffic patterns, and land use characteristics
- Suggestions from the Bicycling In Greensboro (BIG) advocacy organization
- Consultation with NCDOT and MPO member agency staff
- Field measurements taken during Fall 2005
- Locations of bicycle trip attractors (e.g., Downtown Greensboro, universities, schools, shopping centers, hospitals, parks, etc.)
- Connections to the existing and recommended greenway system

Bicycling Rights and Responsibilities

The bicycle facilities recommended in this section are intended to improve bicycling conditions on roadways and provide a visible indication that bicycling is a mode that is supported in the Greensboro Urban Area's transportation system. However, bicyclists are not limited to using roadways with designated bicycle facilities. Under North Carolina law, *bicyclists have the legal right to travel on all roadways other than limited-access roadways*. Bicyclists share the same responsibility as drivers to operate safely and respectfully in the roadway environment and *obey all traffic laws*.

- Connections to bicycle routes and facilities in neighboring MPOs and counties recommended in the Piedmont Triad Rural Planning Organization Bicycle Plan.
- Bicycle Level of Service (Bicycle LOS) analysis conducted between November 2005 and February 2006
- Projects listed in the Greensboro Urban Area 2030 Long-Range Transportation Plan
- Projects listed in the City of Greensboro repaving program
- Projects listed for Division 7 within NCDOT's Statewide 2006-2012 Transportation Improvement Program

Bicycle Network Recommendations

The facilities that are recommended to improve bicycling conditions are shown on Map 4.3 and described in detail in the full plan. These recommendations will create a safe, efficient, and connected system of high-quality bicycle facilities in roadway corridors throughout the area over the next 20 years. The network includes approximately 900 miles of bike routes, paved shoulders, bike lanes, and other on-road facilities.

The network is designed to:

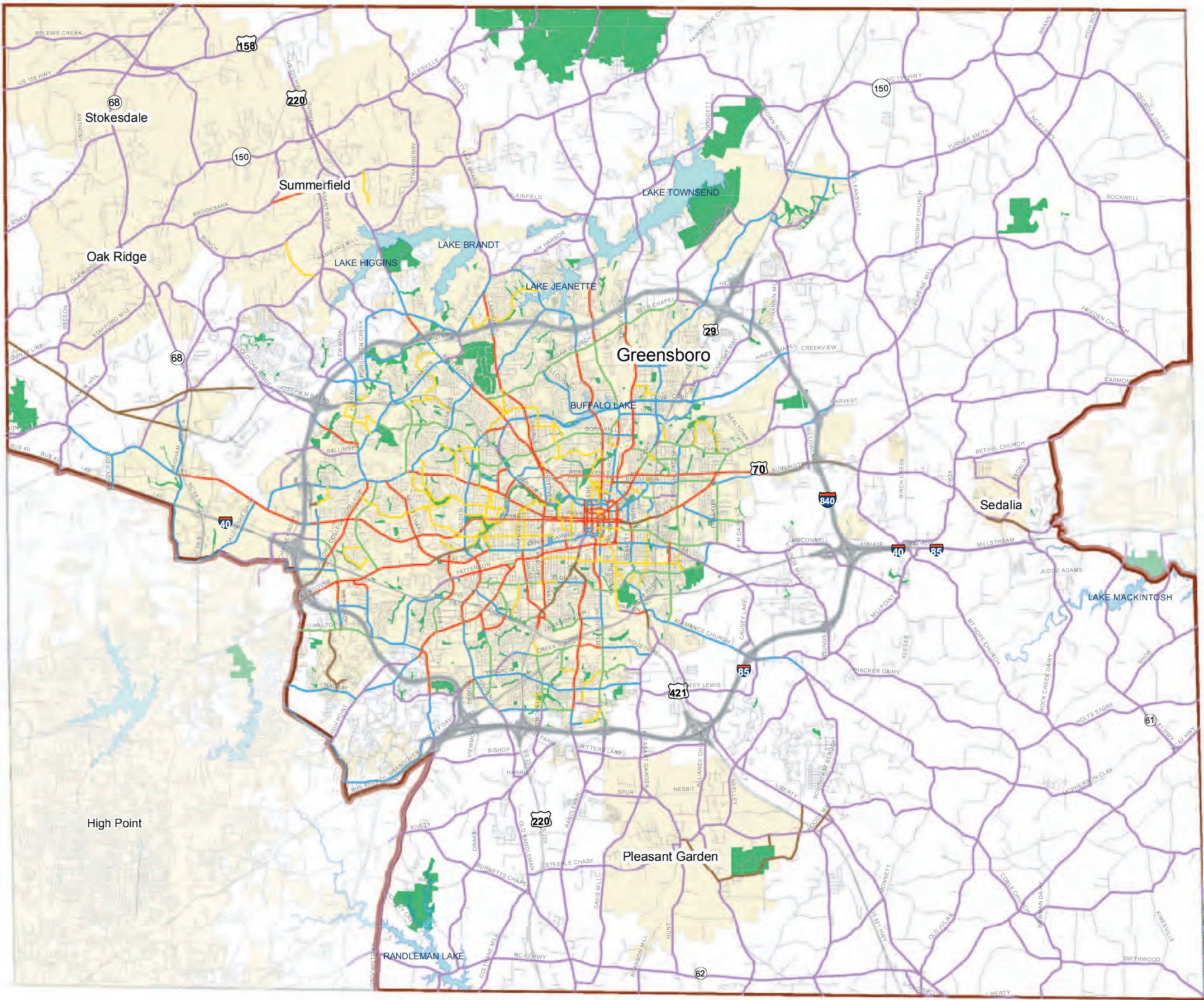
- Serve and connect existing areas of the greatest population density, employment density, and concentration of activities, as well as areas of expected growth;
- Connect to systems in neighboring MPOs and counties;
- Provide access to the transit system;
- Serve areas with populations that rely more on public transit and non-motorized transportation than do populations in other areas;
- Improve or provide key crossings of major highway, river and/or railroad barriers (this includes working with NCDOT on the design of underpasses, overpasses and interchange ramps); and
- Complement the 516-mile system of existing and recommended greenways.

Different types of bicycle facilities are recommended for different road segments, depending on traffic conditions, road characteristics, and demand for bicycling routes connecting various destinations. For example, although a road may provide a desired travel route for bicycling, this plan might *not* recommend bike lanes for the road if vehicle traffic is too heavy to remove vehicle lanes and right-of-way constraints make it impossible to add bike lanes through widening or lane narrowing. In short, the types of bicycle facilities that are recommended here are related to many factors – the plan is not simply a “wish list” filled with ubiquitous bike lanes. An attempt has been made to balance the often-competing interests of drivers, bicyclists, pedestrians, and property owners, at a reasonable cost.

Facility Types

Each of the following facility types is appropriate on different routes, depending on traffic, roadway, and land use characteristics.





GREENSBORO URBAN AREA

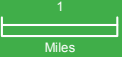
COMPREHENSIVE BICYCLE, PEDESTRIAN, AND GREENWAY PLAN

MAP 4.3

RECOMMENDED ON-ROAD BICYCLE FACILITIES

- Legend**
- Bicycle Lane
 - Paved Shoulder
 - Sidepath (*1)
 - Other On-Road Bicycle Facility (*2)
 - Connector (*3)
 - Further Study
 - Roadway (No Recommendation)
 - Urban Loop
 - Parks
 - Incorporated
 - Greensboro MAB
 - Lakes

(*1) Roadways with recommended sidepaths should also include on-road facilities for bicyclists (unless the road is a limited-access freeway). Note that bicyclists retain the right to ride on the roadway even if a sidepath is adjacent to it.
(*2) Wide outside lanes are used on roadways that are too narrow for bicycle lanes. Other bike facilities should be provided in the future.
(*3) Connectors may have bicycle route signs, but do not require special facilities.



Data Source: City of Greensboro

Bicycle Lanes – a portion of the roadway that has been designated for the use of bicyclists by striping, signing, and pavement markings.

- Always located on both sides of the road (except for one-way streets)
- Carry bicyclists in the same direction as adjacent motor vehicle traffic
- Minimum width: four feet (wider for collector and arterial roads)
- May be added to existing roads by narrowing travel lanes, removing travel/parking lanes, or road widening

Benefits:

- Increased bicyclist comfort
- Increased lateral space between motor vehicles and bicycles
- Indicate the appropriate place to bicycle through complex intersections
- Make bicyclist and motorist movements more predictable
- Increase the capacity of roadways that carry mixed bicycle and motor vehicle traffic
- Make drivers more aware of the need to look for bicyclists before opening car doors from on-street parking spaces



Edgelines/Striped Parking Areas – pavement stripes that narrow the motor vehicle travel lanes to 10 or 11 feet wide.

- Provide a shoulder or a wide striped parking lane (not marked as a bike lane) that bicyclists can use
- Used when on-street parking is allowed but there is not enough space to stripe a five-foot bicycle lane between moving traffic and the parked vehicles
- May help slow motor vehicle speeds



Sharrows (Shared Lane Pavement Markings) –

pavement markings in the motor vehicle travel lane showing a bicycle and chevrons indicating the proper direction of travel.

- Indicates that bikes are welcome on the road
- Shows where cyclists should ride in the lane
- Can mark bike routes
- Can be used on roadways where there is not enough space to provide standard-width bike lanes
- Useful for connecting gaps between other bicycle facilities
- Less expensive than bike lanes (less paint required)

Striped/Paved Shoulders – improved shoulders can provide a safer, more comfortable space for bicycling on some roads.

- No minimum width, but four feet is recommended
- May be accomplished through narrowed motor vehicle travel lanes on some roadways
- Improve safety for motor vehicles
- Prevent pavement damage to the travel lanes
- Provide space for pedestrians on roads without other facilities



- State policy should be followed for low-volume roadways in the urban area

Shared-Use Paths – Off-road transportation links for nonmotorized users (also known as greenway paths and multi-use trails); often constructed within an open-space area.

- Provide a high-quality bicycling experience in an environment that is protected from motor traffic
- Paved or unpaved and should be a minimum of ten feet wide
- Greenways recommended earlier in this plan provide important connections that complement on-road bicycle facilities

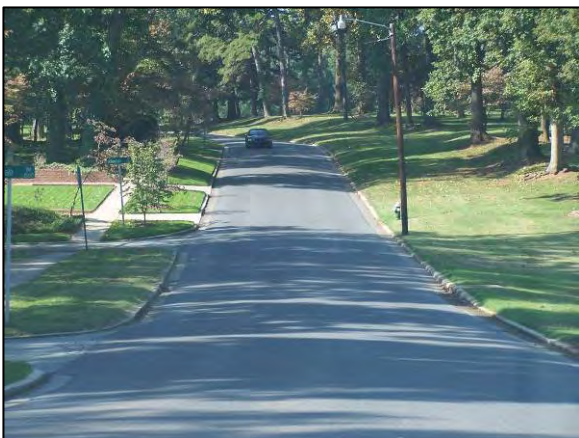
Sidepaths – Similar to shared-use paths, but constructed adjacent to the roadway within the right-of-way.

- Provide a more comfortable place for beginning bicyclists and those who are not comfortable riding on the road with traffic
- Serve as wide sidewalks for pedestrians
- Should not be used to preclude on-road bicycling, but rather to supplement other on-road bicycle facilities (bicyclists retain the right to use the roadway even if a path or trail is adjacent to it, unless the roadway is access-controlled)

Wide Outside Lanes – The lane closest to the road edge in each direction is wide enough for bicyclists and motorists to share (typically 14 feet).

- Allow more separation between bicyclists and motor vehicles than 10- to 12-foot-wide travel lanes
- No striped area exclusively for the use of bicyclists and no markings to indicate where bicyclists should be positioned when passing through an intersection with a right-turn lane
- May make motorists more likely to exceed safe speeds
- The long-term strategy should be to add bicycle lanes to all roadways that currently have wide outside lanes.

Connectors – shared roadways without special bicycle facilities that provide important linkages.



- Low traffic volumes and/or low speeds, which do not require special bicycle accommodations to be bicycle-friendly
- Bicyclists can safely share the travel lanes with motor vehicles

Further Study Required – several high-speed, high-volume roadways have poor conditions for bicycling but do not have straight-forward opportunities to stripe narrower lanes, remove lanes, add shoulders, or make other physical improvements due to right-of-way constraints and traffic volumes.

- Provide important connections and good recreational routes, so should accommodate bicycle travel in the future; further study is needed to determine the best way to balance all users' needs

- Some roads could be improved through corridor redesign projects (reconfiguring the roadway within its existing right-of-way, which may include adding median islands, removing travel lanes, widening sidewalks, and adding bicycle lanes).
- Some roads may require additional right-of-way before bicycle facilities can be added.

Signed Bicycle Route System

A system of signed bicycle routes is also recommended for the Greensboro Urban Area (see Map 4.5). Signed bicycle routes are roadways that are designated as official bicycle routes with “BI-CYCLE ROUTE” signs. Bicycle route signs can be posted on roadways or greenways and used in combination with any other type of bicycle facility (e.g., the same signed bicycle route may use low-volume neighborhood streets, roadway segments with bicycle lanes, and a shared-use path adjacent to a creek).

The recommended 27.3 miles of signed bicycle routes in Greensboro are intended to show residents the most suitable roadways to use for bicycling between Downtown Greensboro and neighborhoods on each side of the City (and between Barber Park and Four Seasons Mall). These routes were selected in order to provide a reasonable level of comfort for all types of cyclists, including people who do not ride often or who are beginners. Therefore, roadways that received Bicycle LOS grades of D, E, and F were avoided. Though nearly all of the roadway segments recommended as bicycle routes have above average suitability, there are several locations on these routes that require spot improvements (e.g., busy road crossings, bridge crossings, turn lanes, etc.).

Citizens highlighted the importance of having bicycle routes that serve all communities in Guilford County and connect to routes in adjacent counties. A more extensive network of signed bicycle routes is not recommended in the short-term because the bicycle conditions on many of the roads in Guilford County outside of the City of Greensboro currently provide a below-average comfort level for all types of cyclists (often due to narrow travel lanes, moderate to high traffic volumes, and a lack of paved shoulders).

Future bicycle facility improvements, such as additional paved shoulders, will improve the suitability of roadways and allow the bicycle routes to be extended further from the central part of Greensboro. These routes should eventually connect the Greensboro area with routes in adjacent counties. Signing future bicycle routes is dependent on making improvements to roadways.

To promote connectivity between the City of Greensboro and adjacent jurisdictions, several roadway corridors have been selected as potential future bicycle routes. These roadways should be re-evaluated when this plan is updated in five years (or on a more frequent basis) in order to take advantage of some of the bicycle facility improvements that will result from this plan. The selection of additional roadways to sign in five years should utilize the experience that the City will gain from signing the initial 27.3 miles of routes.



Note that the potential future routes should not be signed until bicycling conditions are improved.

Transitions Between Bicycle Facilities

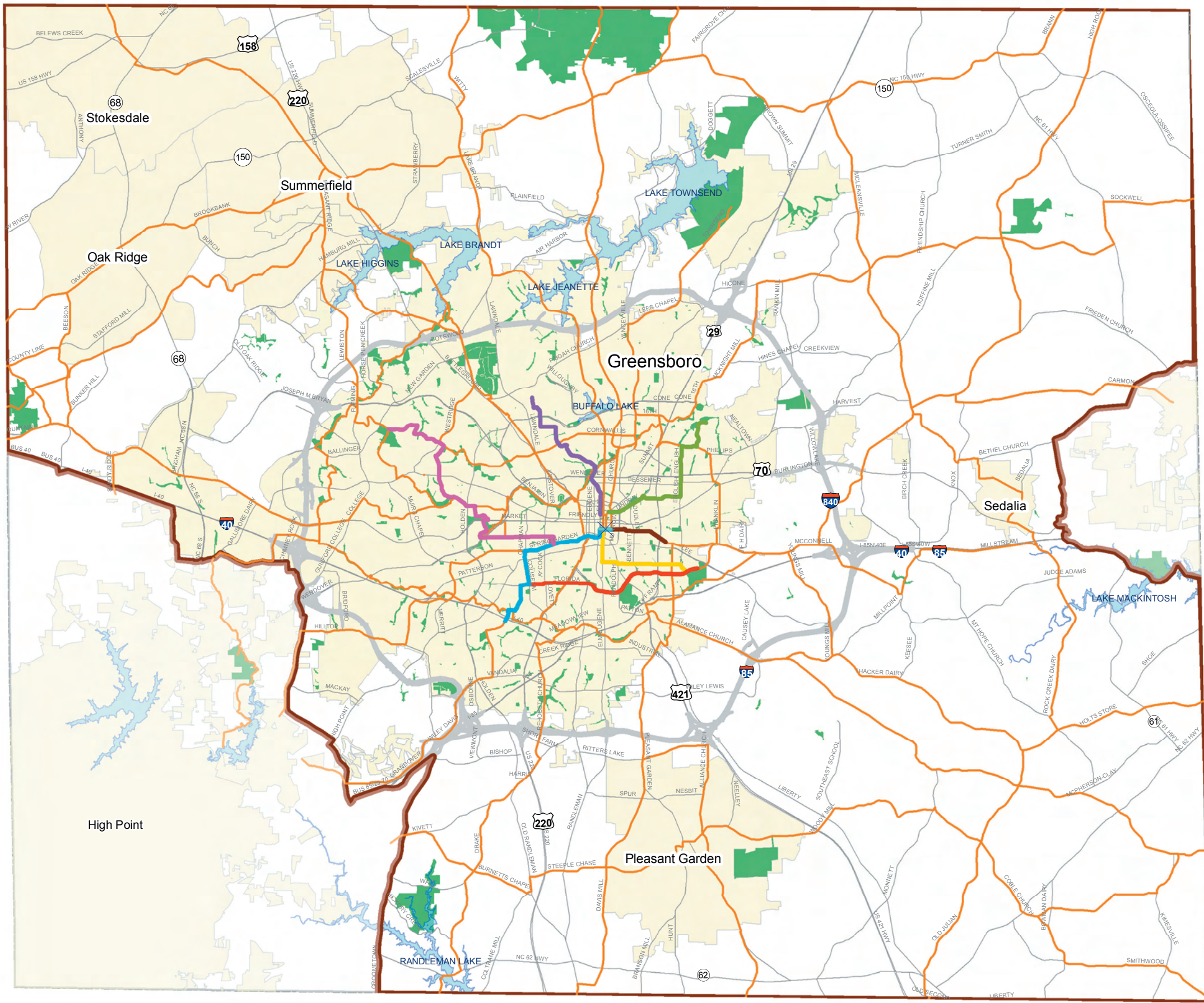
Different segments of the same roadway may require using different bicycle facilities because of differences in traffic volumes, speeds, roadway widths, and other characteristics. It is important to provide safe transitions between different facilities, such as transitioning from a bicycle lane to a shared roadway or from a bicycle lane to a shared-use path. These transitions can be made safer and more understandable for bicyclists and motorists with appropriate treatments, such as signs, pavement markings, curb cuts, etc. Transitions should be addressed as a part of the bicycle facility design process.

Ancillary Supportive Bicycle Facilities

In order to make bicycling a viable transportation option, facilities other than on-road accommodations must be provided. These facilities are described more in the full version of the plan, but they include:

- Bicycle racks and bicycle lockers located close to building entrances and transit entry points
- Bike-friendly traffic signals to allow bicyclists to clear intersections during yellow or trigger a green light the same way motor vehicles do
- High-visibility “Share the Road” bicycle warning signs to make drivers more aware of trail and other key bike route crossings
- Bike-friendly traffic calming measures





GREENSBORO URBAN AREA

COMPREHENSIVE BICYCLE, PEDESTRIAN, AND GREENWAY PLAN

MAP 4.5

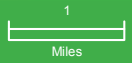
RECOMMENDED SIGNED BICYCLE ROUTES

Legend

Signed Bicycle Routes (*1)

- Barber Park to Four Seasons Mall
- Downtown to Barber Park
- Downtown to Bywood Park
- Downtown to Four Seasons Mall
- Downtown to Jefferson ES
- Downtown to Joyner ES
- Downtown to Willow Oaks
- Potential Long-term Routes
- Urban Loop
- Parks
- Incorporated
- Greensboro MAB
- Lakes

(*1) Signed bicycle routes are recommended on roadways that have a Bicycle LOS grade of A, B, or C (above average bicycle suitability), including some short sections of roadway that can be improved to have above average suitability in the short-term



Data Source: City of Greensboro

Pedestrian Recommendations

This section of the full plan includes recommendations to improve conditions for both traveling along and crossing roadways. These recommendations include facilities such as sidewalks, curb ramps, pedestrian countdown signals, and median islands. Map 4.6 shows recommended new sidewalks.



As with all the recommendations in this plan, the suggested facilities for the area's small towns are a starting point. It is hoped that the towns will consider this plan and begin to implement its recommendations.

At this time, there are several different methods used in the City of Greensboro to provide pedestrian improvements. These implementation programs include the Sidewalk Construction Program, the Sidewalk Ordinance (the Land Development Ordinance) and Street Design Standards, and other efforts. The City's Walkability Policy, which commits the city to the goal of creating a more walkable Greensboro, supports these implementation efforts.

Sidewalk Recommendations

Map 4.6 shows recommended new sidewalks and is intended to provide a flexible guide for the community that can be responsive to changing conditions and community priorities. It is important to note that these recommendations are based on current knowledge, conditions, and projects, and are intended to be updated on an ongoing future basis.

This plan recommends 362 miles of new sidewalks. These recommended sidewalks are organized into a series of tiers. The tiers have been assigned using an qualitative assessment of need and constraints along with several general guidelines, as described below.

Tier 1 (88 miles)

- Both sides of thoroughfare roadways. Thoroughfares typically have higher traffic volumes, higher speed limits, and are often wider than other streets. They are also often lined with commercial, residential, or other land use attractors for pedestrian travel.
- Primary transit routes (that use thoroughfares as well as collector and local roadways).
- Projects that are on thoroughfares that serve as transit routes and connect commercial services with higher density residential development will have the highest priority for implementation.

Tier 2 (47 miles)

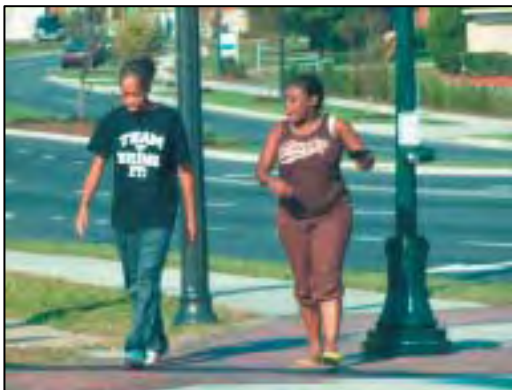
- Both sides of higher-level collector roadways (e.g., with the greatest amounts of existing or potential pedestrian, bicycle, and automobile activity). These streets often have relatively high speeds and provide connectivity between the local street network and the thoroughfares.

Methodology

Recommendations for new sidewalks and pedestrian crossing improvements were developed from existing data, public input, and field work. Roadway classifications, transit service, pedestrian trip attractors, and public input were used to prioritize the recommendations for new sidewalks.

The locations of recommended new sidewalks are shown on Map 4.6. The sidewalk recommendations reflect a range of factors, including:

- Safety (roadway type, traffic volumes, and speeds)
- Demand (presence of a worn path in the roadway shoulder or other observation of significant pedestrian activity; proximity to destinations such as public transportation, shopping, residential and particularly higher density residential uses, schools, parks, etc.)
- Connectivity (filling in short gaps between existing sidewalk sections, extending sidewalk to important destinations)



- Both sides of the remaining transit routes on local and collector streets.

Tier 3 (118 miles)

- Both sides of the collector street system, specifically the mid- to lower-level collector streets.
- Selected local streets that provide significant connections in the pedestrian network or are otherwise known to experience a relatively high level of pedestrian demand.

Tier 4 (23 miles)

- Similar to Tier 3, but implemented later.

Roadway (Incidental) Projects (87 miles)

- A range of locations where sidewalk construction is expected to be tied to more extensive roadway projects. These include planned future roadway projects where corridor sidewalk installation needs to be coordinated with future roadway improvements.
- Lower-level streets without curb and gutter and with bad topographic or other corridor conditions for back-of-ditch sidewalks, but which have a high level of pedestrian demand.

Urban Roadway Pedestrian Crossing Improvements

Improving the safety and convenience of roadway crossings is essential for making the Greensboro Urban Area more walkable. Pedestrians have a much greater risk of being struck by a vehicle when crossing a roadway than walking on the shoulder or sidewalk beside it. This plan recommends a number of engineering solutions to improve difficult pedestrian crossing locations. These treatments, when combined with education and enforcement programs, can make crossings more convenient, reduce pedestrian crashes, and decrease motor vehicle speeds. Lower vehicle speeds reduce the severity of injuries in crashes that do occur.

Table 4(f) in the full plan outlines specific improvements for the Greensboro area. The following list indicates the types of improvements that are included; the full plan describes each in detail.

- Pedestrian overpasses and underpasses
- Leading pedestrian interval (pedestrians see the “WALK” signal 2 to 4 seconds before vehicle traffic on the parallel street is given a green light)
- Right-Turn On Red restriction
- Pedestrian-actuated midblock traffic signal
- High-visibility pedestrian warning signs
- Accessible curb ramps
- Median islands (pedestrian crossing islands)

Fact: Over 70% of the pedestrian crashes reported to police in the City between 2000 and 2004 involved pedestrians crossing roadway travel lanes.

Fact: When hit by a vehicle traveling at 40 miles per hour, a pedestrian has an 85% chance of being killed; at 30 miles per hour, the likelihood decreases to 45%; and at 20 miles per hour the pedestrian fatality rate is only 5%.





GREENSBORO URBAN AREA

COMPREHENSIVE BICYCLE, PEDESTRIAN, AND GREENWAY PLAN

MAP 4.6

RECOMMENDED PEDESTRIAN FACILITIES

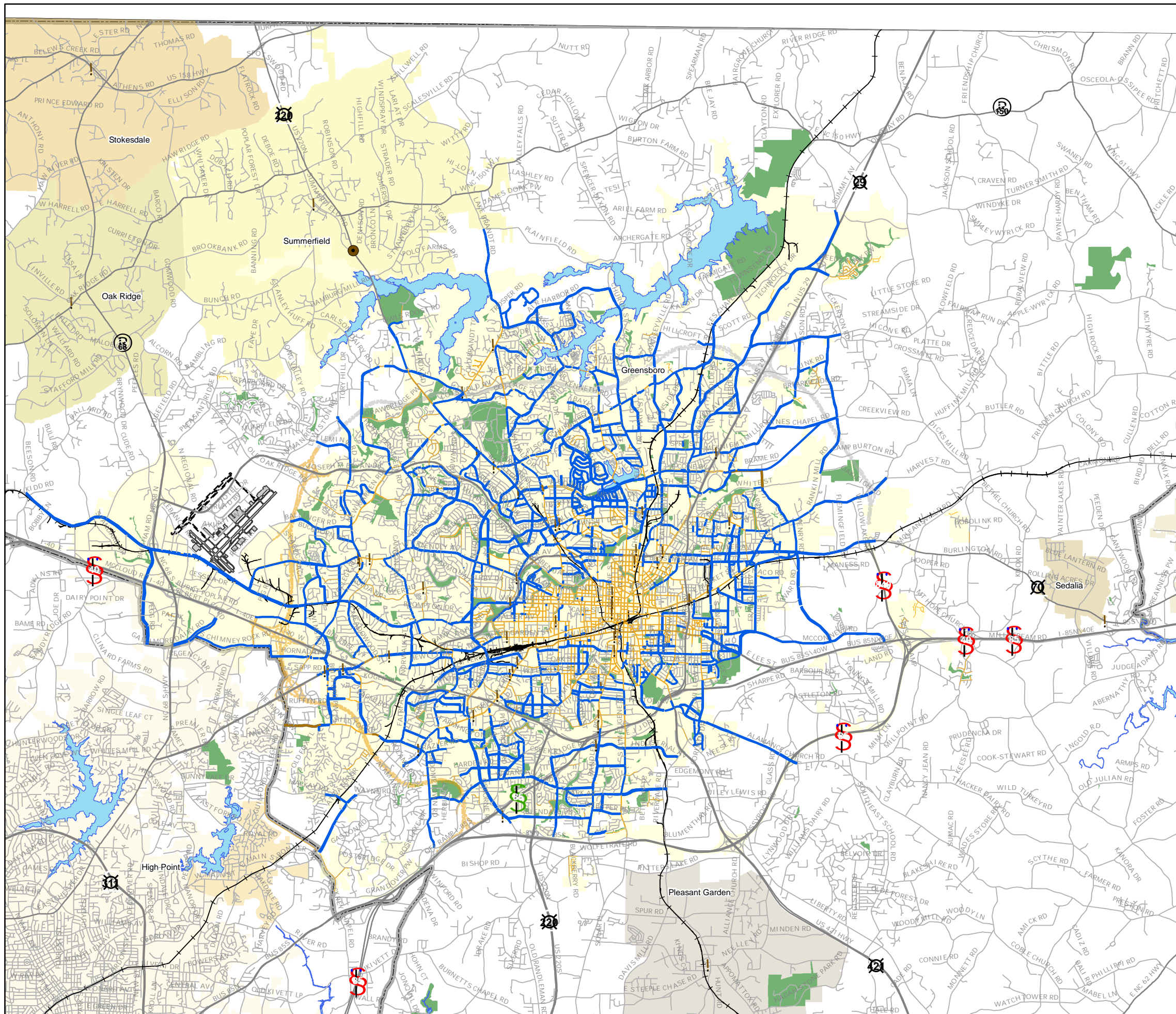
Legend

- ! Pedestrian Crossing Improvements
- Priority**
- Proposed Sidewalk
- In Progress Sidewalk
- Proposed Sidewalk
- Existing Sidewalk
- Major Roads
- Parks
- Greensboro MAB

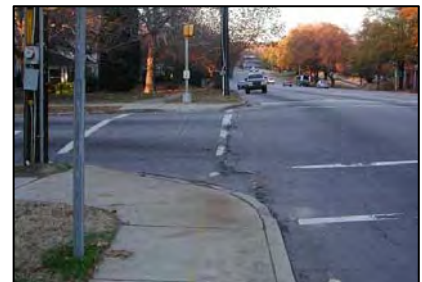
1
Miles



Source: City of Greensboro



- Curb extensions (as done already on Elm St.)
- Turning radius reduction at intersections
- Travel lane removal (for roadways with excess vehicle capacity)
- Pedestrian countdown signals
- Raised pedestrian crossings (raised crosswalks)
- In-roadway pedestrian crossing warning signs
- Visibility – Improved lighting
- Sight-distance improvements



Area Towns and Unincorporated Guilford County

Within the past decade, sidewalks have been provided in some rural developments in Summerfield, Oak Ridge and elsewhere. In addition, sidewalks are required by the City of Greensboro in developments within unincorporated areas that seek and receive City water and sewer. However, for the most part, sidewalks have not been incorporated in the development process.

One goal of this plan is to further the discussion of pedestrian facility needs in the towns and unincorporated areas of Guilford County. The full plan recommends specific projects that can be done to improve pedestrian conditions in five communities outside of Greensboro. Most of these improvements will require coordination with NCDOT and the active support of the affected towns. Therefore, these communities and the MPO should work with NCDOT to establish a “Main Street Retrofit” program in Guilford County. This program should focus on improving pedestrian and bicycle safety and mobility as well as the visual appeal of historic community centers in the Urban Area.

The pedestrian recommendations in the full plan also include a conceptual drawing for pedestrian improvements at one intersection in each of the five suburban/rural communities. These example drawings illustrate the types of treatments that can be used at intersections throughout the urban area.

Integration of Bicycle, Pedestrian, and Greenway Network

The integration of bicycle, pedestrian, and greenway components is essential for overall system connectivity and the long-term achievement of comprehensive alternative transportation, health and



wellness, environmental, and recreation goals. Accomplishing a successful integration will require cooperation between agencies, especially the Greensboro Parks and Recreation Department, Greensboro DOT, and NCDOT.

To accomplish the physical network integration, the following steps should be followed:

- Type V greenway facility corridors should be evaluated for proper bicycle and pedestrian facilities.
- Connectivity and linkages between all portions of the greenway, bicycle, and pedestrian network should be developed.
- Transitions between greenway, bicycle, and pedestrian facilities should be safe and clearly evident to users.
- An overall greenway, bicycle, and pedestrian map should be updated and made available to users.
- Programs should reach out to all users on entire greenway, bicycle, and pedestrian network.
- User conflict resolution solutions and educational strategies should be developed.
- Proper maintenance should be conducted on all component facilities to ensure a comprehensive off-road and on-road network that is safe and enjoyable.
- An Interdepartmental Committee of governmental agencies should be formed to ensure integration of all components.

Program & Policy Recommendations

It will be critical for the City of Greensboro, the surrounding communities, and the State to educate pedestrians, bicyclists, and motorists about safe behaviors in a multimodal roadway environment, to enforce laws that make pedestrian and bicycle travel safer, and to encourage people of all ages and abilities to use the bicycle, pedestrian, and greenway facilities for the promotion of health and wellness. In addition, facility maintenance and long-term facility planning must be built into existing practices and policies. These critical program and policy areas are summarized here but addressed in detail in the full version of this plan.



Education, Enforcement, and Encouragement Programs

The first step towards a more walkable and bike-friendly Greensboro area is providing safe facilities. These facilities should be supported through programs that focus on Education, Enforcement, and Encouragement. These programs enhance the overall health and wellness of the community by promoting, teaching, and enforcing safety. Education, encouragement, and enforcement programs increase user safety, build excitement, and encourage additional area citizens to become pedestrians and bicyclists. Active programming can increase the number of pedestrians and bicyclists, thus increasing overall physical activity. Whether it is an event for children or a distribution of bicycle route maps, these types of programs spread in-

formation and promote all of the positive aspects of bicycling or walking in the Greensboro Urban Area.

Policy Recommendations

Existing land development and roadway design policies have a significant effect on pedestrian and bicycle transportation and recreation in the Greensboro Urban Area. These policies are established in the Guilford County Development Ordinance, City of Greensboro Unified Development Ordinance (UDO), City of Greensboro Street Design Standards, City of Greensboro Walkability Policy, NCDOT Lane and Shoulder Width Policy, and other policy documents. A Policy on



Drainageways and Greenways is a key addition to enforce the role of greenways as flood management facilities.

The existing policies should be strengthened to improve accommodations for non-motorized transportation and recreation facilities. Requirements for creating a safe and convenient environment for pedestrian and bicycle transportation should be integrated into policy documents for the Greensboro Urban Area. They apply to all new roadway construction and roadway reconstruction projects in urban, suburban, and village center areas, as well as in rural areas, as appropriate (e.g., areas where new developments are being constructed). More detailed descriptions of recommended changes to specific policy documents are provided in the full version of this plan.

Planning Projects

The City of Greensboro and surrounding communities should work with NCDOT to conduct several specific planning projects to help identify additional pedestrian and bicycle facility needs in the region. These planning projects can help achieve the following objectives:

- Prioritize intersections for pedestrian countdown signals throughout the Greensboro MPO area.
- Identify additional pedestrian crossing improvements near transit stops and stations.
- Identify bus stop access improvements, including shelters, benches, bicycle racks, and bicycle lockers.



- Recommend new locations for bicycle racks and lockers (e.g., parks, community centers, shopping centers, transit hubs, government buildings, etc.)
- Develop a pedestrian, bicycle, and transit wayfinding sign plan.

Operations and Maintenance

Operations and maintenance refers to specific day-to-day tasks and programs performed to ensure that resources and facilities are kept in good usable condition. This begins with sound design, durable components, and a comprehensive management plan. A management plan should be embraced by the entities responsible for maintaining the bicycle, pedestrian, and greenway network at the beginning of the implementation process. In addition, community groups, residents, business owners, developers and other stakeholders should be engaged in the long-term stewardship of the resources preserved and enhanced by this plan. These roles and specific tasks for governmental agencies are discussed in the full version of this plan.



Funding the Operations and Maintenance Program

Identifying funding sources, creating funding sources and sustaining reliable funding over the long term is critical to the overall success of operations and maintenance and, ultimately, the success and growth of the Greensboro Bicycle, Pedestrian and Greenway Network. The following are potential sources for operations and maintenance:

- Budget Allocations to Current Agency Programs
- Multi-Objective Partnerships
- In-Kind Services
- Trust Fund
- Revenue from Programming
- Working with the Community Foundation of Greater Greensboro

Implementation

Project prioritization and phasing, opportunities and strategies, key action steps, an evaluation and monitoring process, methods for greenway implementation and acquisition, and methods for developing bicycle and pedestrian facilities are included in Chapter 7 of the full plan. The final section of this summary of key findings gives an overview of the prioritization process and the first steps towards implementation. Phasing maps indicating priority levels for each project segment are included in the full plan.

Some projects presented in this plan are capital-intensive and will require the community to work together to provide resources and funding. Other projects are simpler and may be integrated into existing operations at little or no additional cost. For example, adding bike lanes to some roads may require large-scale corridor redesigns

and widening, but other roads can accommodate bike lanes as part of regularly programmed resurfacing projects.

Prioritization of Projects

Because the system will likely be developed incrementally, segments of the bicycle, pedestrian, and greenway network have been prioritized based on the following benefits of each segment:

- Improved connectivity
- Service to underserved areas
- Improved safety
- Existing funding
- Strong public support
- Opportunities such as future roadway construction
- High-potential easements threatened with development pressure

Top Priority Projects:

26 miles of greenways & spurs
40 miles of on-road bike facilities
New sidewalks
Pedestrian crossing improvements

Using this information, greenways, bicycle facilities, and pedestrian facilities have been divided into three phases: short-term (0-7 years), medium-term (7-15), and long-term (15-25). The full plan identifies short-term action items as top priorities; development efforts should occur within 3 years for these improvements. These projects are intended to build community support and momentum for implementing additional recommendations of this plan. Maps 7.1 through 7.3 in the full plan show phased recommendations.

Map 7.4 shows short term priorities: projects that are proposed for implementation within the first three years of plan adoption. They are already funded and in the project development process. On-street bicycle improvements on this map are intended to take advantage of the most promising opportunities presented by upcoming resurfacing projects. Map 7.5 presents what are considered key project priorities for future implementation. Some of these may be longer-term, but all would provide important strategic connections in the bicycle, pedestrian, and greenways network.



Establishing Performance Measures

The MPO and City of Greensboro should work with local communities and advocacy organizations to establish performance measures to benchmark progress towards achieving the goals of this plan. These performance measures should be stated in an official report within one to two years after the plan's adoption. Baseline data should be collected as soon as the performance measures are established.

Action Steps

These action steps, which may occur simultaneously, pave the way for implementation of this plan.

- 1) Adopt this plan (adopted by MPO on October 11, 2006)
- 2) Form committees to support implementation.
- 3) Secure and commit short-term funding and develop a long-term funding strategy.

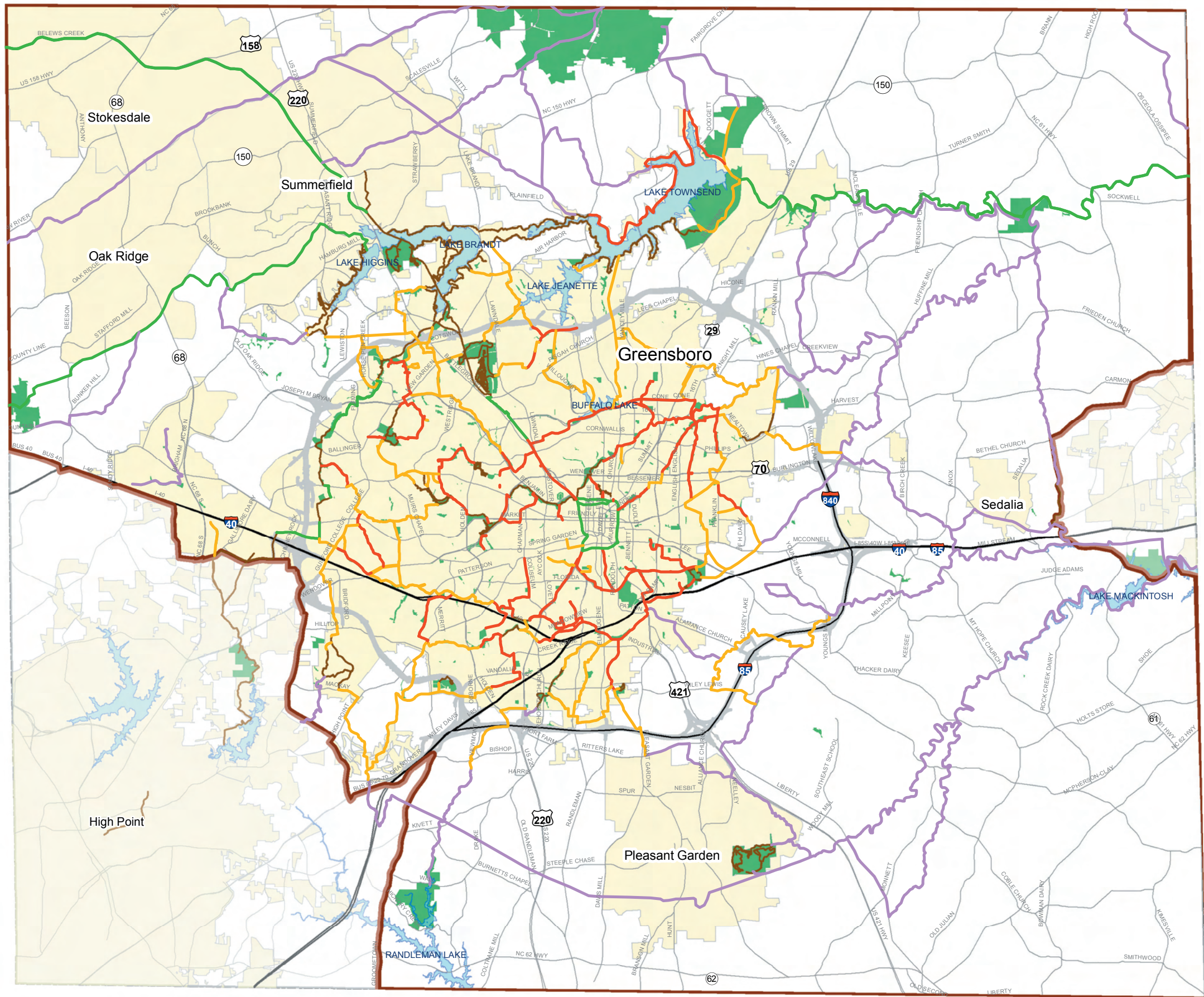


- 4) Work on the top priority projects.
- 5) Begin acquiring land and easements necessary to complete priority greenway segments and fill gaps.
- 6) Ensure that greenway, bicycle, and pedestrian planning is integrated with other transportation planning and funding efforts at the state and local level, as well as with long range and current land use, economic development, parks and recreation, environmental, and community planning.
- 7) Facilitate development of local citizen committees and groups to advocate the plan, build support, promote awareness, and develop local education and encouragement programs.
- 8) Organize regular forums for citizens to raise pedestrian, bicycle, and greenway issues to GDOT, Parks and Recreation, and NCDOT staff. These forums should be supplemented by online feedback forms.
- 9) Develop and implement education, encouragement, and awareness programs.

The Greensboro Urban Area can turn the vision of a connected, integrated greenway, bicycle, and pedestrian system into a reality. The physical and policy recommendations from this plan provide the ingredients, while the implementation strategy provides an adaptable framework for action. The pace and progress of implementation will depend upon the continued support of citizens and decision-makers throughout the urban area.



To download the full version of the BiPed plan, visit www.quampo.org, scroll to the bottom of the page, and click on "[Bicycle, Pedestrian, and Greenways Plan](#)."



**GREENSBORO
URBAN AREA**

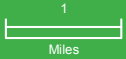
**COMPREHENSIVE
BICYCLE, PEDESTRIAN,
AND GREENWAY PLAN**

MAP 7.1

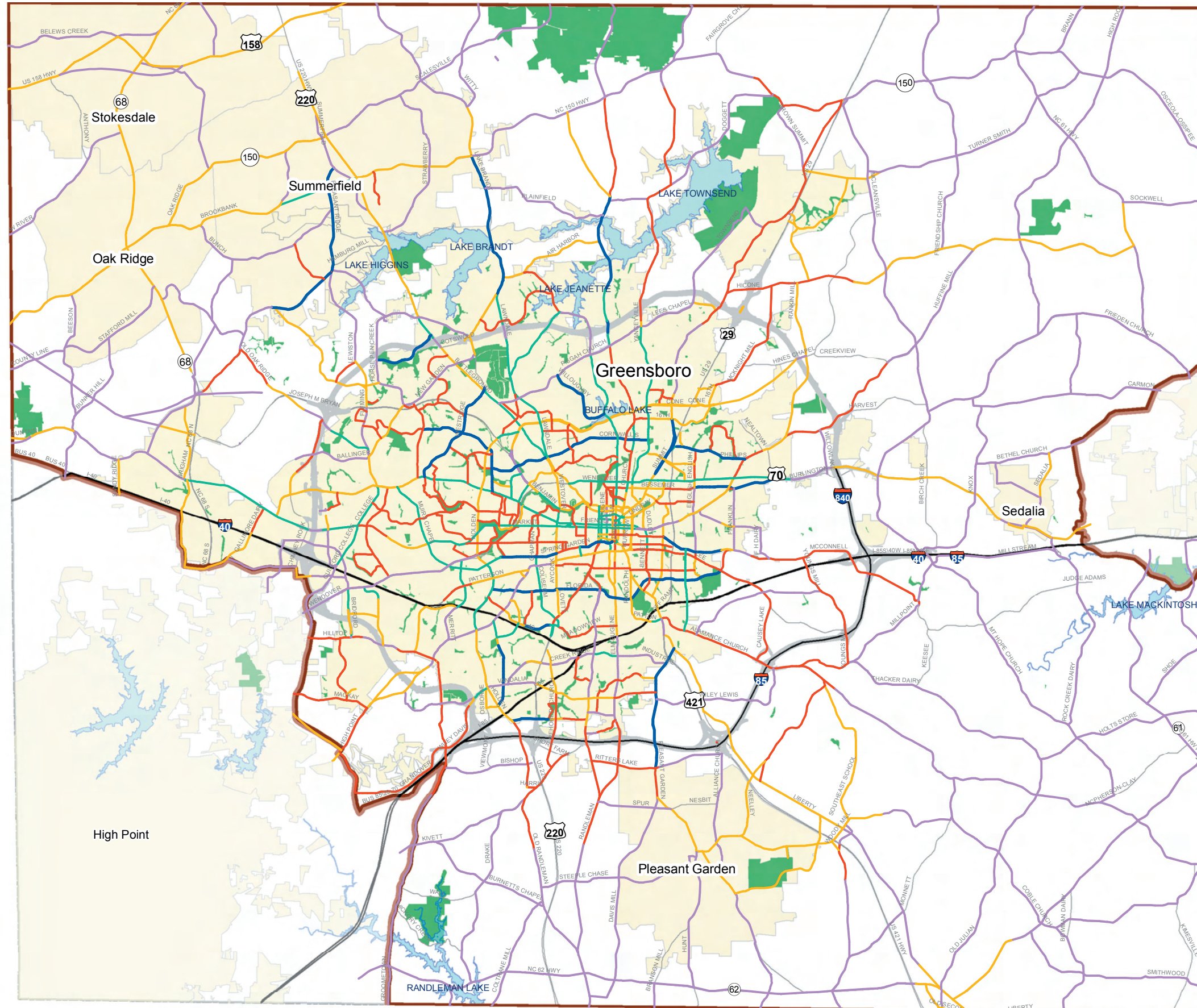
**RECOMMENDED
GREENWAY
PHASING**

Legend

- Short Term
- Medium Term
- Long Term
- Ongoing Efforts
- Existing Off-Road Trails
- Urban Loop
- Interstate
- Major Roads
- Parks
- Incorporated
- Greensboro MAB
- Lakes



Data Source: City of Greensboro



GREENSBORO URBAN AREA

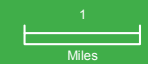
COMPREHENSIVE BICYCLE, PEDESTRIAN, AND GREENWAY PLAN

MAP 7.2

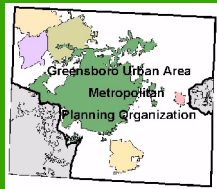
RECOMMENDED BICYCLE PHASING

Legend

- Top Priority (0-2 years)
- Short Term (0-5 years)
- Medium Term (7-15 years)
- Long Term (15-25 years)
- Further Study Required
- Interstate
- Urban Loop
- Parks
- Incorporated
- Greensboro MAB
- Lakes



Data Source: City of Greensboro



Greensboro Urban Area

Comprehensive Bicycle, Pedestrian, and Greenway Plan

Map 7.4

Short Term Priorities

Legend

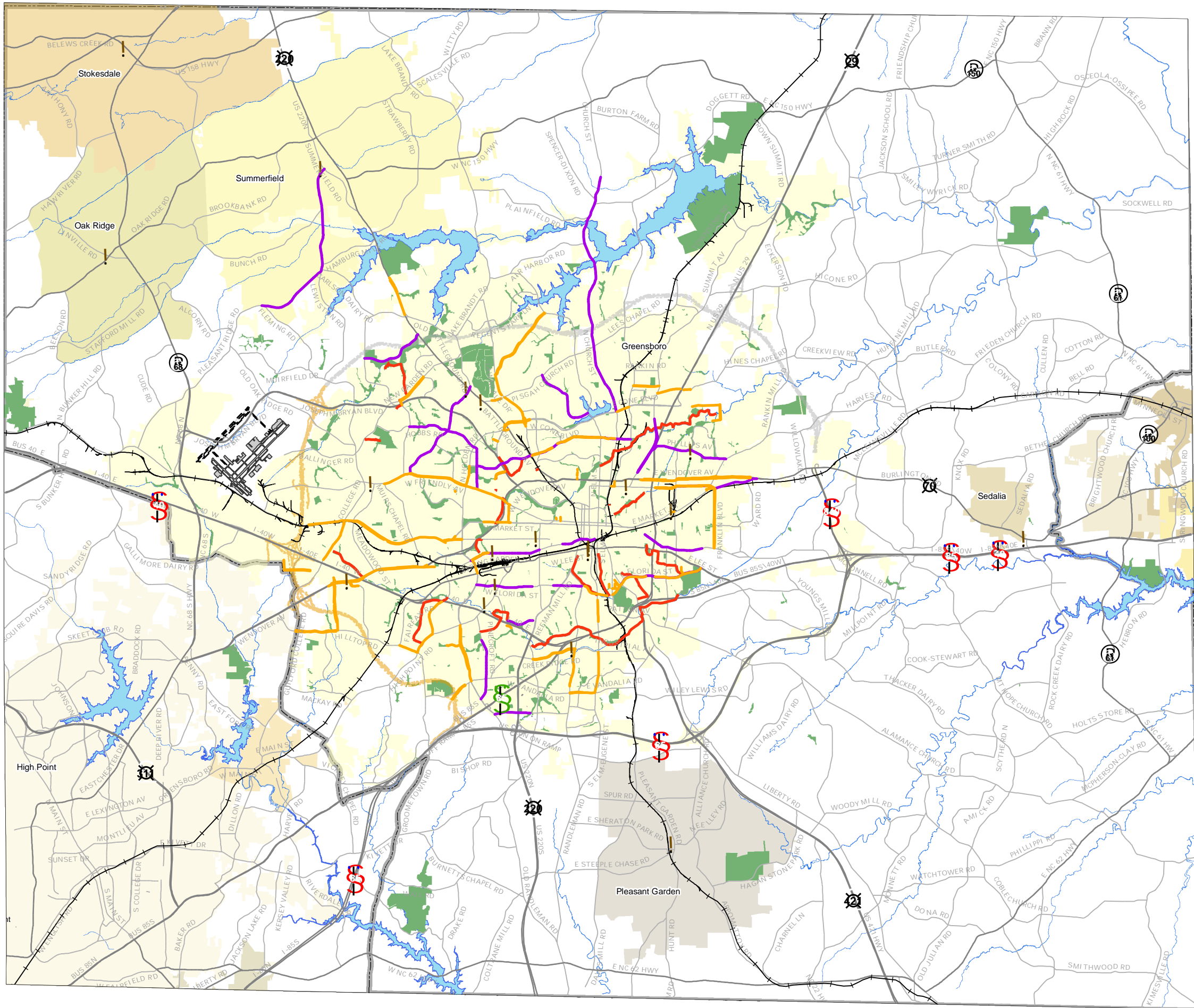
- ! Top Priority Ped Xings
- Top Priority Bicycle Facility
- Top Priority Greenways
- Top Priority Sidewalks
- Major Roads
- Parks
- Greensboro MAB

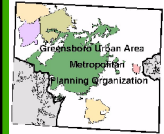
1
Miles



Source: City of Greensboro

Prepared by P.S. Holland, GISP





Greensboro Urban Area

Comprehensive Bicycle, Pedestrian, and Greenway Plan

Map 7.5

Key Projects

Legend

- ! Key Pedestrian Crossings
- Key Sidewalks
- Existing Sidewalks
- Key Bicycle Facilities
- Key Greenways
- Major Roads
- Parks
- Greensboro MAB

1
Miles



Source: City of Greensboro

Prepared by P.S. Holland, GISP, and P.B. Ohms

